In short, all that is necessary in order to bring about such a localisation of the pores is that the subdermal cavities should be arranged at some little distance from one another and have a number of pores leading into each.

(3) *Pores localised in areas owing directly to the habit of the sponge.*—We have only one example to adduce belonging to this class, although very likely future researches will show such a condition to be not uncommon. The example in question is a deep-sea sponge, *Tedania actiniiformis*, nobis, obtained at Station 299 (off Valparaiso), at a depth of 2160 fathoms and on a bottom of blue mud. The external form of the sponge will be best understood from the figure (Pl. XI. fig. 2; *cf.* also p. 55); it is attached to a piece of rock. At a short distance below the flattened top there is a definite narrow zone (Pl. XI. fig. 2, *p.z.*, and fig. 2*a*) of pores encircling the sponge. In this zone the pores are so abundant as to reduce the dermal membrane to a mere network. Judging from the general appearance of the sponge and the nature of the bottom upon which it lives, we have little hesitation in saying that in life it was buried in the mud up to within a short distance of the top, and hence the pores, in order that clean water might gain access to them, became confined to that portion of the surface which was above the mud, namely, a narrow zone immediately below the flattened top. The genus *Tedania* is characteristically an inhabitant of shallow water, and in no other species do we find an arrangement of the pores similar to that which characterises this deep-sea form. There can be no doubt that in this case the arrangement of the pores is dependent directly upon the habit of the sponge, and not, as in most cases, upon the arrangement of the dermal skeleton or of the subdermal cavities.

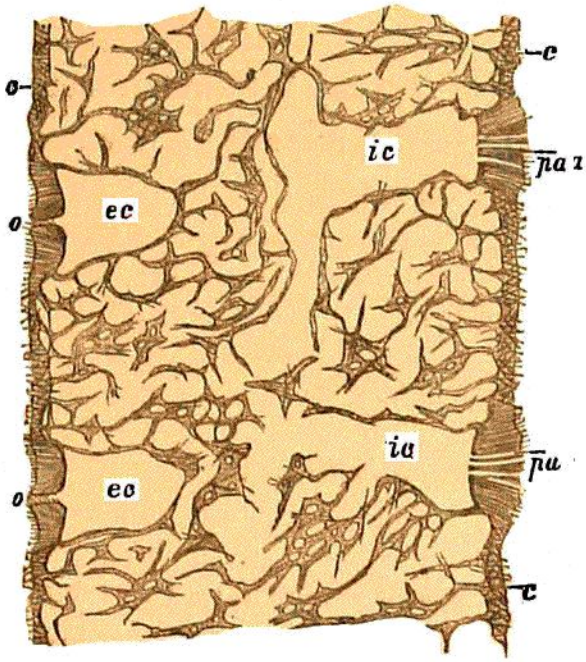

FIG. XI.—*Cliona dissimilis.* Vertical section of a decalcified specimen; *o*,*o*, oscula; *pa*, pore-areas; *c*, ectosome; *ic*, inhalent canals; *ec*, exhalent canals. × 4.

Before leaving the question of the pores we must consider briefly the condition of flabellate sponges in this respect. It is an almost invariable rule, that in flabellate sponges the pores are to be found on one surface and the oscula on the other. Thus in *Phakellia ventilabrum*, var. *connexiva* (Pl. XXXV. figs. 3, 3*a*; Pl. XLIX. fig. 3), and *Phakellia flabellata*, nobis (Pl. XXXIV. figs. 2, 3, 3*a*), this arrangement is very well illustrated, and the same condition occurs in *Myxilla frondosa*, nobis (Pl. XXVI. figs. 1, 1*a*); and *Gellius flabelliformis*, nobis (Pl. XXVI. figs. 5, 5*a*). Again in that very remarkable sponge *Esperiopsis challengeri* (Pl. XVIII.) the pores occur only on the concave surfaces of the lamellæ (Pl. XVIII. fig. 4), while the oscula are all on the convex surfaces.

By far the most remarkable instance of this kind is, however, afforded by a boring